

PATENT ABSTRACTS OF JAPAN

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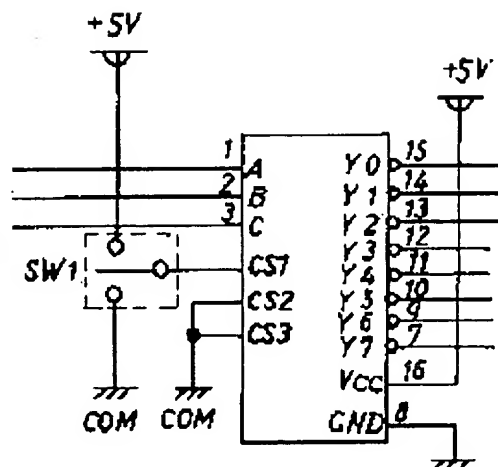
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(54) FACSIMILE EQUIPMENT WITH KEY LOCK SWITCH

(57)Abstract:

PURPOSE: To simply add an abuse preventing function to an existing facsimile equipment by using a key lock switch so as to validate or invalidate the facsimile operation.

CONSTITUTION: A 1st changeover contact SW1 operated by on/off of a key lock switch is connected to a terminal CS1 of a line decoder. When the contact SW1 is switched, the switch sides of the terminal CS1 are connected to a +5V terminal and a common ground terminal. With the key lock switch closed, the contact SW1 is thrown to the position of +5V, then a voltage of +5V is applied to the terminal CS1 and the normal operation is executed. Furthermore, with the key lock switch open, the contact SW1 is thrown to the position of the common ground terminal and no sensing is available. That is, when the lock switch is open, since an output of the line decoder is +5V entirely, the selection of columns is disable, No key entry sense is allowed even when any key is depressed in this state.



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Facsimile with key lock switch - incorporates key lock switch in
operation panel which operates first change over contact for normal or
invalid operation of key

Patent Assignee: RICOH KK (RICO)

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Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
JP 7015582	A	19950117	JP 93156647	A	19930628	199512 B

Priority Applications (No Type Date): JP 93156647 A 19930628

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
JP 7015582	A		8 H04N-001/00	

Abstract (Basic): JP 7015582 A

The FAX machine consists of a scanner part (11) which reads an original document. A compression apparatus (13) compresses the electrical signal which is then transmitted. A received is reproduced and output at the FAX machine. The FAX device has an operational panel (16) which has a key lock switch (34), controls a facsimile operation.

The ON/OFF operation of the key lock switch operates a first change over contact of line decoder connected to key input detection matrix of the operation panel. An input key or LCD on the operation panel is made effective or invalid by the key lock switch.

ADVANTAGE - Prevents unauthorised use of FAX device. Uses simple construction.

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Industrial Application] This invention relates to the facsimile apparatus with a key lock switch which can forbid the use of those other than a specific user by forming a key lock switch.

[0002]

[Description of the Prior Art] In the facsimile apparatus which limits an operator, it is required for actuation to be impossible by a certain approach, and to carry out. For this reason, although a limit will usually be applied with software, there is a problem that reconstruction expense will become high, by this approach. With "the mounted facsimile apparatus" of a publication, the circuit where an ignition key detects whether it is an ON state is in the former, for example, JP,62-167750,A, and actuation of the facsimile apparatus carried only when it was an ON state is enabled. However, when performing a use limit of the facsimile apparatus which is not carried in a vehicle, the above-mentioned approach cannot be applied.

[0003]

[Problem(s) to be Solved by the Invention] Thus, in the conventional facsimile apparatus, since there was usually only an approach to which a limit is applied with software as an approach for restricting an operator, the trouble and cost which design a program had started. The purpose of this invention is to offer the facsimile apparatus with a key lock switch which can realize the control function which solves such a conventional technical problem, and confirms facsimile actuation, or is made into an invalid by the easy approach.

[0004]

[Means for Solving the Problem] In order to attain the above-mentioned purpose, the facsimile apparatus with a key lock switch by this invention (**) -- by actuation from OPEPNERU (16), while compressing the signal which read the manuscript and carried out photo electric conversion and transmitting with a scanner (11) In the facsimile apparatus which reproduces and outputs the received data, while forming a key lock switch (34) on OPEPNERU (16) To the Rhine decoder connected to the key input detection matrix (61) on OPEPNERU (16) It is characterized by operating the 1st change-over contact and changing a key input to normal actuation thru/or key input sense impossible by preparing the 1st change-over contact (SW1) which operates by turning on and off of a key lock switch (34), and turning a key lock switch (34) on and off. moreover, (**) -- while forming a key lock switch (34) on OPEPNERU (16), the good thing made improper is also characterized by facsimile actuation by preparing the 2nd change-over contact (SW2) which operates by turning on and off of a key lock switch (34) to the degree controller of LCD ** on OPEPNERU (16), and making LCD (73) turn on thru/or switch off by actuation of a key lock switch (34). Furthermore, while forming a key lock switch (34) on OPEPNERU (Ha) (16), the 3rd change-over contact (SW3) which operates by turning on and off of a key lock switch (34) is prepared in the output section of the manuscript sensor on a scanner (11), and the effective thing for which it is, and it carries out, it is made an invalid, and facsimile actuation is made improper good is also characterized by the sense of a manuscript sensor by actuation of a key lock

switch (34).

[0005]

[Function] In this invention, in the facsimile apparatus possessing a scanner, a plotter, compression/regenerator, a variable power machine, a buffer, OPEPANERU, SCU (system-control unit), a hard disk, and a communication link unit, the user to whom the key lock switch for limiting a user on the actuation side of OPEPANERU is prepared for, and use is permitted turns OFF a key lock switch, when use is completed. Change-over contact (SW1) which is interlocked with turning on and off of a key lock switch, and operates is attached all over the circuit connected to the input key of OPEPANERU by constructing beforehand, when a key lock switch is ON, normal actuation is carried out, and when a key lock switch is OFF, it is made for key input sensing to become impossible. Moreover, change-over contact (SW2) which interlocks and operates to the degree controller of LCD ** of the LCD module in OPEPANERU as other approaches at turning on and off of a key lock switch is attached, when a key lock switch is ON, normal actuation is carried out, when a key lock switch is OFF, the electrical potential difference for the degrees of LCD ** is not applied, but LCD is having put out the light with as, and it is made to become unusable. Moreover, change-over contact (SW3) which is interlocked with a key lock switch and operates in the manuscript sensor of the manuscript read station in a scanner as other approaches is attached, when a key lock switch is ON, normal actuation is carried out, and when a key lock switch is OFF, it is made to become unusable as existence of a manuscript cannot be sensed. Thereby, an abuse prevention function can be attached by the easy approach to the existing facsimile apparatus.

[0006]

[Example] Hereafter, a drawing explains the example of this invention to a detail. Drawing 1 is the block diagram of the facsimile apparatus with a key lock switch in which one example of this invention is shown. The scanner into which 11 inputs an image in drawing 1, the plotter to which 12 outputs a receiving image, The compression/regenerative apparatus (1) with which 13 reproduces compression thru/or received data for transmit data, (2), (3), The variable power equipment to which 14 expands or reduces an image, and 15 A buffer (1), As for a buffer (2) and 20, OPEPANERU to which 16 performs operator actuation, the system-control unit (SCU) by which 17 controls the whole, the communication link unit in which 18 contains a network control unit, the CCE, etc., and 19 are [a hard disk (HDD) and 10] system buses. The key lock switch of this invention is attached in OPEPANERU 16, and when it turns ON this key lock switch, the normal actuation of it is attained by carrying out a switch to closing. Moreover, when a key lock switch is turned OFF, by carrying out a switch to open, the existence of a manuscript is not sensed, but it always displays nothing [manuscript] (when change-over contact is prepared in a scanner). Three change-over contact (SW) interlocked with turning on and off of a key lock switch is arranged. namely, the Rhine decoder in an input key detection matrix -- the 1st change-over contact (SW1) -- the LCD driver in OPEPANERU -- the 2nd change-over contact (SW2) -- the inside of the port control section of scanner circles, and a manuscript read station -- the 3rd change-over contact (SW3) -- one -- or three are attached.

[0007] Drawing 2 is the front view of OPEPANERU in drawing 1, and the side elevation of a key lock switch. drawing 2 (a) -- setting -- 21 -- various status-display lamps and 22 -- a LCD display and 23 -- a line indicator and 24 -- a function selection lamp (NO.1) and 25 -- an initial registration carbon button and 26 -- YES, the NO carbon button, and 27 -- a cursor carbon button and 28 -- for a function selection button (NO.3) and 31, as for a stop key and 33, a ten key and 32 are [a function selection button (NO.2) and 29 / an one-touch carbon button and 30 / a start key and 34] key lock switches. Thus, the front face of OPEPANERU is equipped with the key lock switch of this invention. The configuration of the key lock switch 34 forms the usual switch, as shown in drawing 2 (b). 341 is the part of a key and an operator carries out a switch to ON or OFF by turning to a reverse include angle with this. 342 is the part of a switch, and 343 inserts with the lead part which leads ON or OFF to others, and is a part.

Drawing 3 is drawing showing the operating state of a key lock switch. The conditions of a front key are [an OFF state (**) and a front key condition] ON states (**) at the time of the upper right to the lower left at the time of the upper left to the lower right. When a key switch is OFF, let the input key on

OPEPANERU be an invalid. At this time, LCD on OPEPANERU puts out the light. Moreover, when a key switch is ON, the input key on OPEPANERU is confirmed. LCD on OPEPANERU is turned on at this time.

[0008] Drawing 4 is the array Fig. of the key input detection matrix on OPEPANERU, and drawing 5 is the enlarged drawing of the Rhine decoder which requires reconstruction by this invention all over the circuit of drawing 4. The input key detector consists of a key input detection matrix and a Rhine decoder, and each key is arranged at the intersection of the matrix of A train - H train. Next, when the COPY key is pushed, it explains how the location is recognized. First, control of IS0-IS2 determines which train is detected. That is, when set to Y0=0 at the time of A of the Rhine decoder shown in drawing 4 and drawing 5, B, and the C= oar 0, it becomes selection of A train connected to it. It turns out that the COPY key was pushed on coincidence if IR7 changed to +5V-0V in this condition when the electrical potential difference of +5V was applied to IR0-IR7. Drawing 5 explains the outline of the construction for carrying out this invention. The 1st change-over contact (SW1) which operates by turning on and off of a key lock switch for CS1 terminal of the Rhine decoder is attached. +5V and a common grounding terminal are connected to the change side of the 1st change-over contact (SW1). (a) When a key lock switch is ON, and change-over contact (SW1) falls on the +5V side, it becomes normal actuation in order for +5V to join CS1.

(b) When a key lock switch is OFF, the sense of change-over contact (SW1) becomes impossible by falling on a common grounding terminal side.

That is, in (b), since the output of the Rhine decoder is set to all +5V, selection of a train becomes impossible. Even if it pushes one of keys in this condition, IR0-IR7 do not change, but key input sense is impossible.

[0009] Drawing 6 is the connection diagram of the OPEPANERU section and a system-control unit, and drawing 7 is the reconstruction description-of-work Fig. of the LCD module in drawing 6. As for Display LED (light emitting diode) and 63, in drawing 6, the key matrix which shows 61 of the OPEPANERU section 16 to drawing 4, and 62 are [a LCD (liquid crystal display) module and 64] OPEPANERU control sections. The OPEPANERU control section 64, the LCD module 63, and the system-control unit (SCU) 65 are connected by bus, and transfer of a signal is performed. As shown in drawing 7, the LCD module 63 consists of a LCD controller 71, a LCD driver 72, and a LCD body 73, and is connected by signal bus, respectively. The electrical-potential-difference terminal for the degrees of LCD ** of the LCD driver 72 is connected to the volume for the degree adjustment of LCD ** formed between -12V and a common ground, and, thereby, the degree of ** is adjusted. What is necessary is just to convert this like an arrow head in this invention. That is, the 2nd change-over contact (SW2) which operates by turning on and off of a key lock switch is inserted between the electrical-potential-difference terminal for the degrees of ** of the LCD driver 72, and volume. ** When a key lock switch is ON, make closing the 2nd change-over contact (SW2). This performs normal actuation. Moreover, when ** key lock switch is OFF, the 2nd change-over contact (SW2) is made open. Since the electrical potential difference for the degrees of LCD ** is not given at this time, LCD is having put out the light with as.

[0010] Drawing 8 is the internal configuration Fig. of the scanner section, and drawing 9 is the reconstruction description-of-work Fig. of the manuscript read station in drawing 8. For CPU by which 81 controls the scanner section 11, ROM which stores the program whose CPU81 carries out 82, RAM 83 remembers fixed data to be, and 84, as for a port control section and 86, in drawing 8, the handshake section with the other unit section and 85 are [a manuscript read station and 87] buses. A manuscript is read and the read data are stored under control of CPU81 via a bus 87 through the port control section 85 in the appointed area of RAM83 by the manuscript read station 86. As shown in drawing 9, in the manuscript read station 86, as a manuscript sensor, in response to light, photo electric conversion is carried out by the photo transistor from a photodiode, and the changed electrical signal is outputted to the port control section 85. In this invention, the 3rd change-over contact (SW3) is inserted within manuscript read station 86a between a manuscript sensor and the output terminal to port control-section 85a.

** When a key lock switch is ON, make closing the 3rd change-over contact (SW3). Thereby, normal actuation is attained.

** When a key lock switch is OFF, make open the 3rd change-over contact (SW3). Thereby, the existence of a manuscript will not be sensed, always turns into nothing [manuscript], and the scanner section serves as impossible of operation.

[0011]

[Effect of the Invention] Since facsimile actuation is realizable by the easy approach [control function / which is effectively made into an invalid] using a key lock switch according to this invention as explained above, an abuse prevention function can be attached by easy construction to the existing facsimile apparatus.

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]

[Drawing 1] It is the block diagram of the facsimile apparatus with a key lock switch in which one example of this invention is shown.

[Drawing 2] They are the transverse-plane block diagram of a display/input key of OPEPANERU in drawing 1, and the configuration Fig. of a key lock switch.

[Drawing 3] It is the explanatory view of a key lock switch of operation.

[Drawing 4] It is the plugging chart of an input key detector.

[Drawing 5] It is the explanatory view of the part of the key lock switch shipfitter thing reconstruction in drawing 4.

[Drawing 6] They are the internal configuration of the OPEPANERU section, and a connection diagram with a system-control unit.

[Drawing 7] It is the internal configuration of a LCD module and the explanatory view of key lock switch shipfitter thing reconstruction in drawing 6.

[Drawing 8] It is the internal configuration Fig. of the scanner section.

[Drawing 9] It is the explanatory view of the key lock switch shipfitter thing reconstruction in the manuscript read station in drawing 8.

[Description of Notations]

10 System Bus

11 Scanner Section

12 Plotter Section

13 Compression/Regenerative Apparatus (1), (2) (3)

14 Variable Power Equipment

15 Buffer (1)

16 OPEPANERU Section

17 System-Control Unit (SCU)

18 Communication Link Unit

19 Buffer (2)

20 Hard Disk (HDD)

21 Various Status-Display Lamps

22 LCD Display

23 Line Indicator

24, 28, 30 Function selection button

25 Initial Registration Carbon Button

26 YES, the NO Carbon Button

27 Cursor Carbon Button

29 One-touch Carbon Button

31 Ten Key

32 Stop Key

33 Start Key
34 Key Lock Switch
61 Key Matrix
62 Display LED
63 LCD Module
64 OPEPANERU Control Section
71 LCD Controller
72 LCD Driver
73 LCD
81 CPU of Scanner Section
82 ROM
83 RAM
84 Handshake with Other Units
85 85a Port control section
86 86a Manuscript read station

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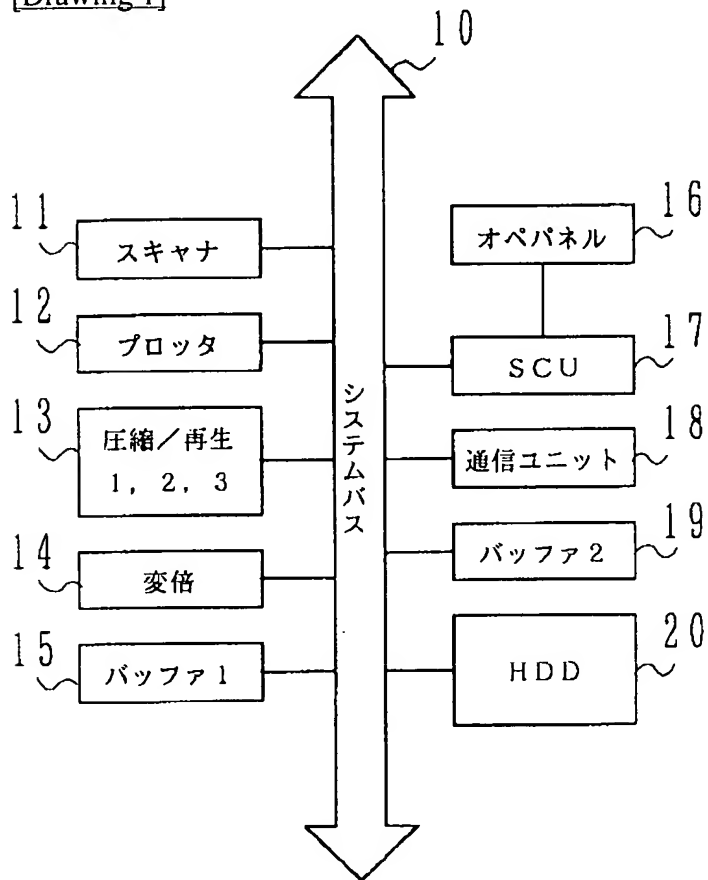
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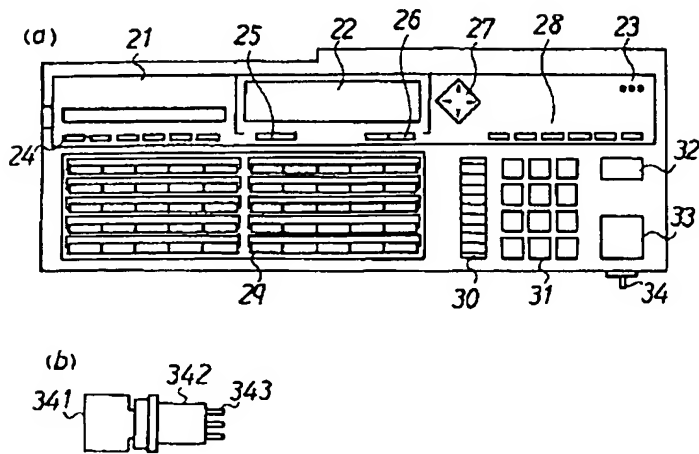
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DRAWINGS

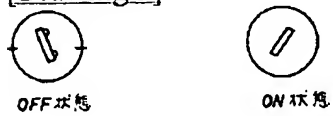
[Drawing 1]



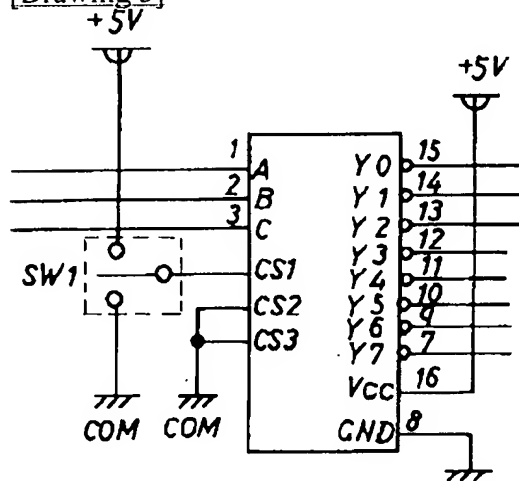
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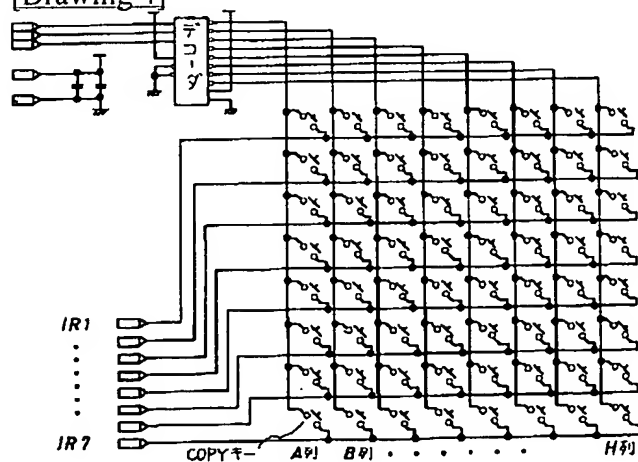
[Drawing 3]



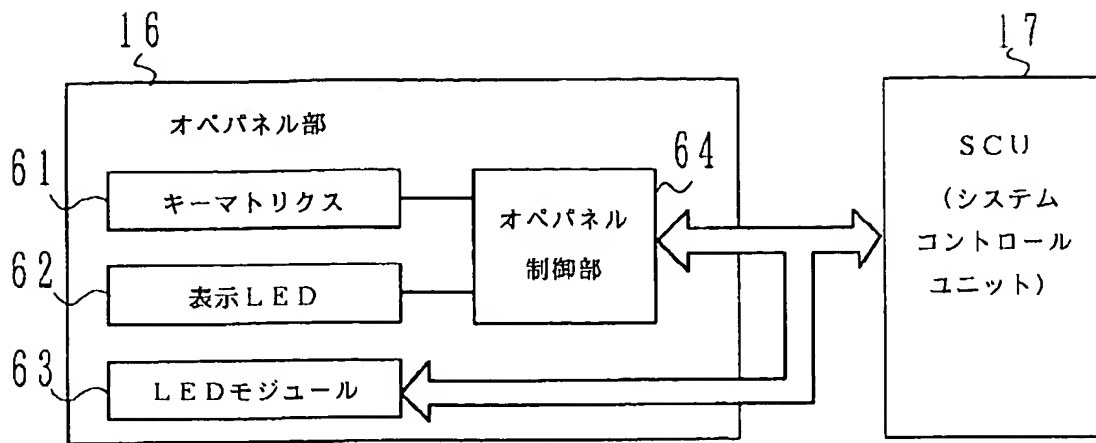
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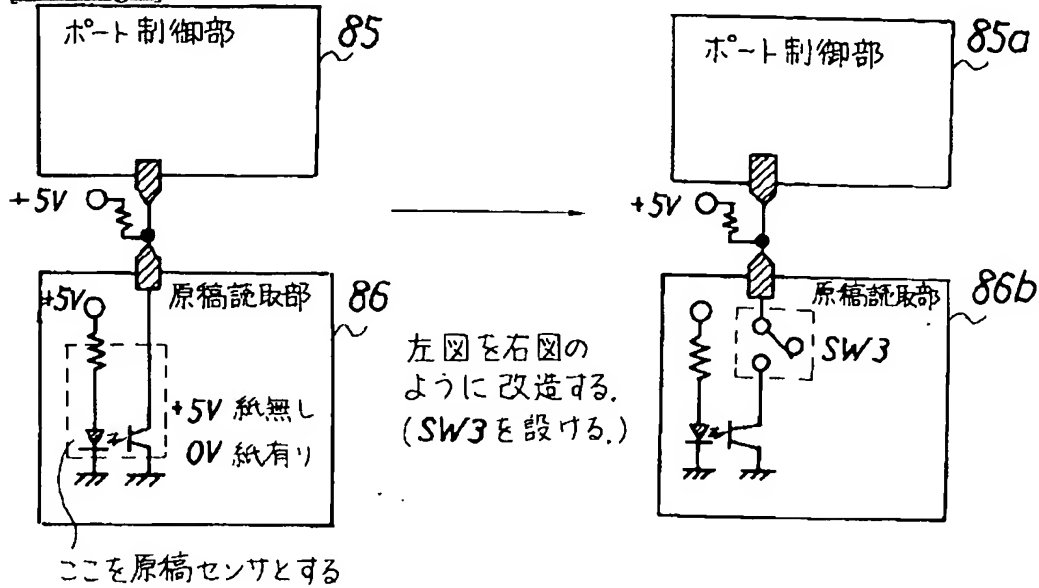
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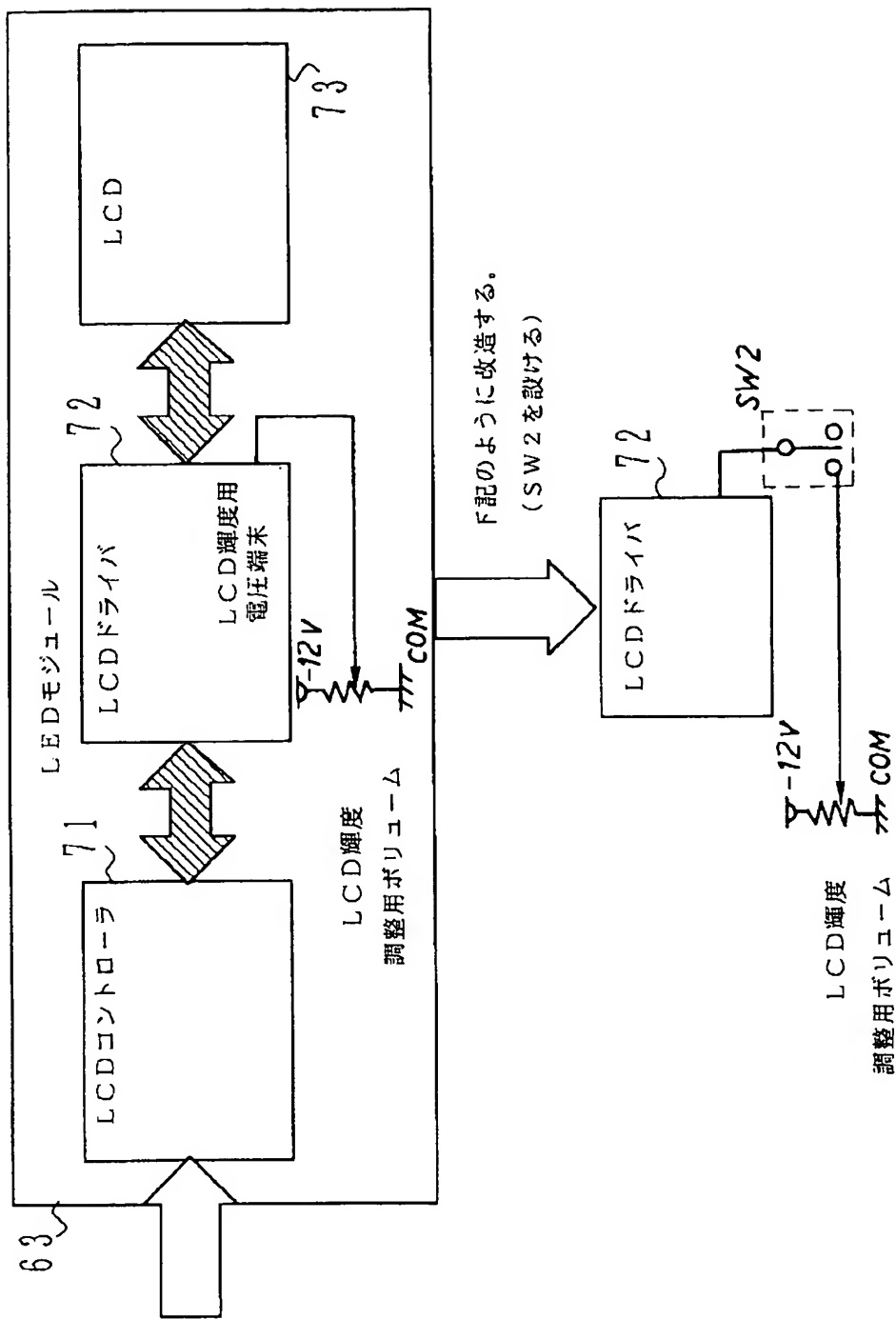
[Drawing 6]



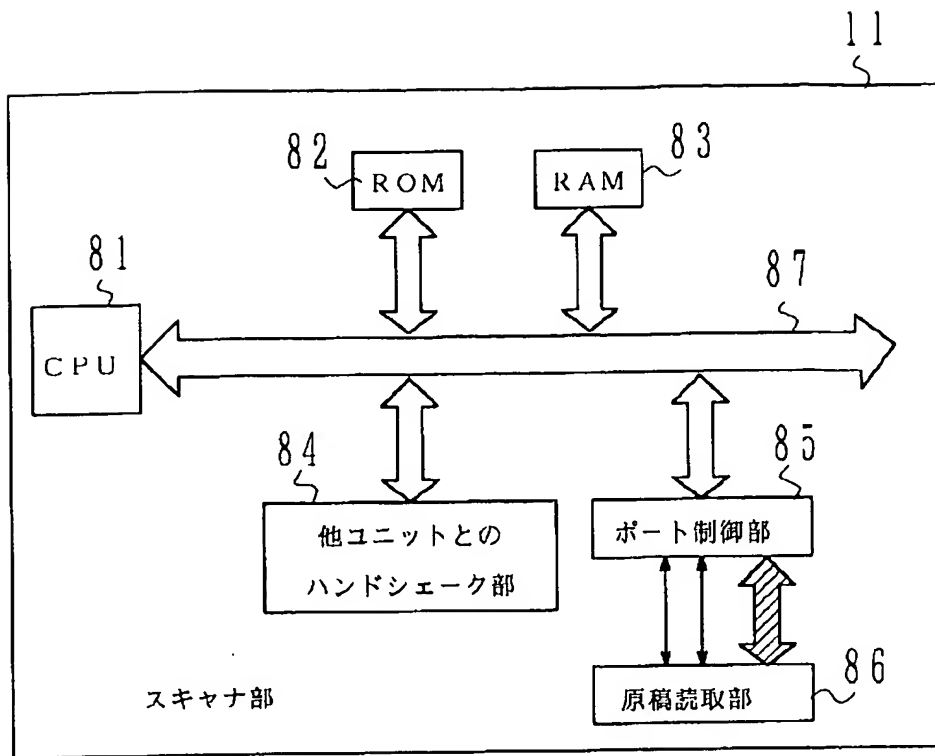
[Drawing 9]



[Drawing 7]



[Drawing 8]



[Translation done.]